

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference F 2842 PCT	FOR FURTHER ACTION		see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, Item 5 below.
International application No. PCT/EP 03/01759	International filing date (day/month/year) 20/02/2003	(Earliest) Priority Date (day/month/year) 20/02/2002	
Applicant F. HOFFMANN-LA ROCHE AG			

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 7 sheets.

☒ It is also accompanied by a copy of each prior art document cited in this report.

1. Basis of the report

- a. With regard to the **language**, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ the international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

- b. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international search was carried out on the basis of the sequence listing:

☒ contained in the international application in written form.

☒ filed together with the international application in computer readable form.

☐ furnished subsequently to this Authority in written form.

☐ furnished subsequently to this Authority in computer readable form.

☒ the statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.

☒ the statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished

2. ☒ **Certain claims were found unsearchable** (See Box I).

3. ☐ **Unity of invention is lacking** (see Box II).

4. With regard to the title,

☐ the text is approved as submitted by the applicant.

☒ the text has been established by this Authority to read as follows:

ANTI-AMYLOID BETA ANTIBODIES AND THEIR USE

5. With regard to the abstract,

☒ the text is approved as submitted by the applicant.

☐ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. The figure of the drawings to be published with the abstract is Figure No.

☐ as suggested by the applicant.

☐ because the applicant failed to suggest a figure.

☐ because this figure better characterizes the invention.

☒ **None of the figures.**

INTERNATIONAL SEARCH REPORT

International Application No

PCT/EP 03/01759

A. CLASSIFICATION OF SUBJECT MATTER
 IPC 7 C07K14/47 C07K16/18 A61K39/395 G01N33/68

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
 IPC 7 C07K

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ, BIOSIS, MEDLINE, SEQUENCE SEARCH, CHEM ABS Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
✓ X	WO 01 39796 A (HEBERT LISE; KONG XIANQI (CA); NEUROCHEM INC (CA); CHALIFOUR ROBER) 7 June 2001 (2001-06-07) page 10; figures 1-4,6; examples I-III	1-22
✓ X	WO 02 10354 A (CHRETIEN MICHEL; SEIDAH NABIL G (CA); CROMLISH JAMES A (CA); MONTR) 7 February 2002 (2002-02-07) * SEQ ID NO.3 * page 2; claims 1-17	1-22
✓ X	EP 0 683 234 A (TAKEDA CHEMICAL INDUSTRIES LTD) 22 November 1995 (1995-11-22) page 5 -page 9	1-22
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☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

* Special categories of cited documents :

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

T later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

X document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

Y document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

& document member of the same patent family

Date of the actual completion of the international search

30 July 2003

Date of mailing of the international search report

12/08/2003

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2
 NL - 2280 HV Rijswijk
 Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
 Fax: (+31-70) 340-3016

Authorized officer

Sirim, P

INTERNATIONAL SEARCH REPORT

International Application No

PCT/EP 03/01759

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
✓X	WO 97 08320 A (MORPHOSYS PROTEINOPTIMIERUNG; KNAPPIK ACHIM (DE); PACK PETER (DE);) 6 March 1997 (1997-03-06) cited in the application abstract; table 28	23-28
Y	page 194	1-22
✓X	O'NUALLAIN BRIAN ET AL: "Conformational Abs recognizing a generic amyloid fibril epitope" PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF USA, NATIONAL ACADEMY OF SCIENCE. WASHINGTON, US, vol. 99, no. 3, 5 February 2002 (2002-02-05), pages 1485-1490, XP002211263 ISSN: 0027-8424 the whole document	1-22
✓X	GHOSHAL NUPUR ET AL: "Tau-66: Evidence for a novel tau conformation in Alzheimer's disease." JOURNAL OF NEUROCHEMISTRY, vol. 77, no. 5, June 2001 (2001-06), pages 1372-1385, XP002249110 ISSN: 0022-3042 abstract page 1373 page 1376; figure 3 page 1382	1-22
✓X	KNAPPIK A ET AL: "Fully synthesis human combinatorial antibody libraries (HuCAL) based on modular consensus frameworks and cds randomized with trinucleotides" JOURNAL OF MOLECULAR BIOLOGY, LONDON, GB, vol. 296, no. 1, 2000, pages 57-86, XP000939143 ISSN: 0022-2836 cited in the application the whole document	23-28
Y		1-22
✓Y	WO 01 15655 A (MICHAELSON DANIEL M; UNIV RAMOT (IL)) 8 March 2001 (2001-03-08) page 8 -page 9; claims 1-4, 23-26, 66-68 page 22 page 24	1-22
✓Y	EP 1 125 905 A (PEPSCAN SYSTEMS B V) 22 August 2001 (2001-08-22) abstract column 1 -column 3; claims 1-18	1-22
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FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

Continuation of Box I.2

Claims Nos.: 1-3 and claims 8, 9, 11-22 (all in part)

Present claims 1-3 and claims 8, 9, 11-22 as far as they refer to same subject-matter as claims 1-3 relate to an antibody which is defined by reference to the epitopes which are specifically recognized by said antibody.

However, the use of such parameters to define an antibody is considered to lead to a lack of clarity within the meaning of Article 6 PCT.

It is impossible to compare the parameters the applicant has chosen to define the subject-matter for which protection is sought with what is set out in the prior art. Any antibody cited in the prior art generated for binding to an epitope located between the amino acid positions 2 to 25 of the amyloid beta peptide (see e.g. either of the documents D1 to D3, D5 or D11 could bind to the amyloid beta fragments as defined in claims 1 to 3.

Moreover, the two regions defined in said claims which form the epitope recognized by the antibodies are so close to each other that they do not necessarily form a discontinuous epitope.

Therefore, claims 1-3 and claims 8, 9, 11-22 are unclear and their subject-matter is not sufficiently disclosed as required by Art. 6 and 5 PCT.

Consequently, the search has been restricted to those claims wherein the antibodies are defined by technical features, namely their sequences.

The applicant's attention is drawn to the fact that claims, or parts of claims, relating to inventions in respect of which no international search report has been established need not be the subject of an international preliminary examination (Rule 66.1(e) PCT). The applicant is advised that the EPO policy when acting as an International Preliminary Examining Authority is normally not to carry out a preliminary examination on matter which has not been searched. This is the case irrespective of whether or not the claims are amended following receipt of the search report or during any Chapter II procedure.

INTERNATIONAL SEARCH REPORT

International application No.
PCT/EP 03/01759

Box I Observations where certain claims were found unsearchable (Continuation of Item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☒ Claims Nos.: 1-3 and claims 8, 9, 11-22 (all in part)
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
see FURTHER INFORMATION sheet PCT/ISA/210
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of Item 2 of first sheet)

This International Searching Authority found multiple inventions in this International application, as follows:

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/EP 03/01759

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
WO 0139796	A	07-06-2001	AU 1847301 A BR 0016022 A WO 0139796 A2 CA 2388559 A1 EP 1235587 A2 NO 20022531 A US 2002094335 A1	12-06-2001 06-08-2002 07-06-2001 07-06-2001 04-09-2002 12-07-2002 18-07-2002
WO 0210354	A	07-02-2002	CA 2313828 A1 AU 7952501 A WO 0210354 A2 CA 2417873 A1	01-02-2002 13-02-2002 07-02-2002 07-02-2002
EP 0683234	A	22-11-1995	AT 239797 T DE 69432629 D1 EP 1308461 A2 EP 0683234 A1 WO 9417197 A1 US 5750349 A US 5955317 A	15-05-2003 12-06-2003 07-05-2003 22-11-1995 04-08-1994 12-05-1998 21-09-1999
WO 9708320	A	06-03-1997	AT 219517 T AU 725609 B2 AU 6874596 A CA 2229043 A1 DE 69621940 D1 DE 69621940 T2 DK 859841 T3 WO 9708320 A1 EP 0859841 A1 ES 2176484 T3 JP 2001519643 T PT 859841 T US 6300064 B1	15-07-2002 12-10-2000 19-03-1997 06-03-1997 25-07-2002 16-01-2003 09-09-2002 06-03-1997 26-08-1998 01-12-2002 23-10-2001 29-11-2002 09-10-2001
WO 0115655	A	08-03-2001	AU 6722300 A EP 1209969 A2 WO 0115655 A2	26-03-2001 05-06-2002 08-03-2001
EP 1125905	A	22-08-2001	EP 1125905 A1 AU 3620501 A CA 2400338 A1 EP 1255716 A1 WO 0160769 A1	22-08-2001 27-08-2001 23-08-2001 13-11-2002 23-08-2001
WO 9620218	A	04-07-1996	US 5811310 A WO 9620218 A1 AU 711140 B2 AU 4523596 A CA 2208329 A1 EP 0796279 A1 JP 10511943 T	22-09-1998 04-07-1996 07-10-1999 19-07-1996 04-07-1996 24-09-1997 17-11-1998
WO 02096937	A	05-12-2002	US 2002094335 A1 WO 02096937 A2	18-07-2002 05-12-2002
WO 02064734	A	22-08-2002	WO 02064734 A2	22-08-2002